

1 90. (New) A reduction projection catadioptric optical
2 system according to Claim 85, wherein an exit pupil of the
3 reduction projection catadioptric optical system is
4 substantially circular.

1 91. (New) A projection exposure apparatus which projects
2 a predetermined pattern on a mask onto a photosensitive
3 substrate, comprising a catadioptric optical system according
4 to Claim 85 which projects a predetermined pattern on a mask
5 onto a photosensitive substrate.

1 92. (New) A projection exposure method comprising:
2 preparing a catadioptric optical system according to
3 Claim 85; and
4 projecting an image of a predetermined pattern on a mask
5 onto a photosensitive substrate using the catadioptric
6 optical system.

REMARKS

Dependent claims have been revised merely to improve
their form. Claims 63-92 have been added in order to
provide more comprehensive protection for Applicants'

invention. A Supplemental Information Disclosure Statement is submitted herewith.

A marked-up copy of the amended claims is attached.

An early action on the merits is respectfully requested.

A check for \$1,374.00 is attached in payment of the required fee for an RCE and additional claims.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

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Marked-up copy of Claims - 09/615,081

1 28. (Twice amended) A projection exposure apparatus,
2 comprising [wherein] a catadioptric optical system according
3 to Claim 18 which projects a predetermined pattern on a mask
4 onto a photosensitive substrate.

1 40. (Amended) A projection exposure apparatus which
2 projects a predetermined pattern on a mask onto a
3 photosensitive substrate, comprising a [wherein said]
4 catadioptric optical system according to Claim 29[,] which
5 projects a [said] predetermined pattern on a mask onto a
6 [said] photosensitive substrate.

1 62. (Amended) A projection exposure apparatus which
2 projects a predetermined pattern on a mask onto a
3 photosensitive substrate, comprising a [wherein said]
4 catadioptric optical system according to Claim 51[,] which
5 projects a [said] predetermined pattern on a mask onto a
6 [said] photosensitive substrate.